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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,340	08/31/2001	Agathagelos Kyrilidis	96072CIP2	1425

7590 02/08/2007
Martha Ann Finnegan, Esq.
Cabot Corporation
Billerica Technical Center
157 Concord Road
Billerica, MA 01821-7001

EXAMINER

PHASGE, ARUN S

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/945,340

Applicant(s)

KYRLIDIS ET AL.

Examiner

Arun S. Phasge

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5, 11-76, 78 and 79 is/are pending in the application.
- 4a) Of the above claim(s) 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5, 16-76, 78-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 5, 16, 19, 21, 28, 31, 33, 39, 42, 44, 51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stalling in view of Japanese Patent 04-346830 ('830).

The Stalling patent only discloses the use of fullerenes, which are carbon particles, which are smaller than the claimed range. The '830 patent teaches the use of carbon particles including the claimed range having attached organic molecules used as packing for a chromatography column (see abstract).

Accordingly, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to use bigger sized carbon molecules in place of the fullerenes taught by the Stalling patent, because the Japanese patent teaches that bigger carbon molecules can be used to present additional benefits with the use of said porous carbon.

Claim 17, 29 and 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stalling in view of Japanese '830 as applied to claims above, and further in view of Kusano of record for reasons of record.

Claims 18, 20, 22-27, 30, 32, 34-38, 41, 43, 45-50, 52, 54-76, 78-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stalling in view of Japanese '830 as applied to claims above, and further in view of Boes of record for reasons of record.

Response to Arguments

Applicant's arguments filed 9/15/06 have been fully considered but they are not persuasive.

Applicants further argue that the Stalling patent does not describe the attachment of the aromatic portion of the defined group be attached to the carbonaceous material. The specification does not recite that the aromatic portion of the defined group is attached to the carbonaceous material. Therefore, the figure 10B shows just such attachment, since the aromatic portion is attached to said carbonaceous material.

The use of the crosslinking agents would read upon the claims, in particular since the formation of the polymer particle attached to a carbonaceous particle would read upon the claims.

With regard to the combination of the Kusano patent with the Stalling patent, applicants argue that the Kusano patent does not disclose the attachment onto anything, rather is merely discloses the coating onto the substrate. As disclosed in the Japanese patent the coating of the carbon particles with organic materials would amount to attachment within the meaning of the claims. To use a different material, such as the amino acid derivative taught by the Kusano patent, would have been obvious to one having ordinary skill in the art at the time the invention was made, because such coating provides an "attachment" of the organic material onto the substrate.

With regard to the combination of the Boes with the Stalling patent, applicants argue that the Stalling patent uses the organic groups to attach the fullerenes to the polymer or siliceous particles.

The Stalling patent teaches that different attachments of the organic compounds to the fullerenes affects the chromatographic separation of the obtained separation medium and are not there merely for the formation of a

lattice structure (see col. 4, line 50 to col. 5, line 28). The secondary references are cited to show the use of other organic compounds attached to carbonaceous material.

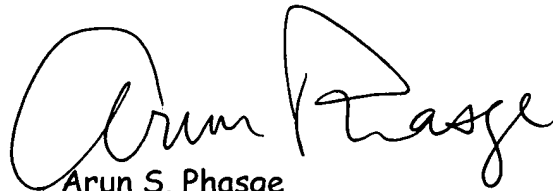
It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Stalling patent with the teachings contained in the Boes patent, because the secondary reference teaches other organic groups attached to carbonaceous material.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Arun S. Phasge
Primary Examiner
Art Unit 1753

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